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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/030,012 | 12/18/2001 | Thomas Schuler | VEP-500-A | 5794 |

7590 03/24/2004

Andrew R Basile
Young & Basile P C
Suite 624
3001 West Big Beaver Road
Troy, MI 48084

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| EXAMINER |
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SMITH, ZANDRA V

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| ART UNIT | PAPER NUMBER |
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2877

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/030,012 | Applicant(s) SCHULER, THOMAS | |
| | Examiner Zandra V. Smith | Art Unit 2877 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-19 is/are allowed.
- 6) ☒ Claim(s) 1-10 and 20 is/are rejected.
- 7) ☒ Claim(s) 11-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12-18-03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 18 December 2001 has been entered and the references considered by the examiner.

Claim Objections

Claim 1 is objected to because of the following informalities: "hat" in line 5 of claim 1 should be "that". Appropriate correction is required.

Claim 1 is objected to because the claim is narrative in form. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Levers et al.* (5,543,923) in view of *Stam et al.* (5,923,027).

As to **claims 1-2, 5, 7, and 20**, Levers provides a sensor device for detecting the degree of wetting on a pane, comprising:

a receiving unit to receive signals from a lens system, characterized in that the lens system has two lens units (col. 3, lines 25-50), that the lens units register the same area of the window, that the depth of field of the two lens units covers and is restricted to the depth of the window, and a separate receiving unit is assigned to each lens unit (see fig. 1 and fig. 4). Levers differs from the claimed invention in that the device is positioned directly against the window and an evaluation unit to analyze the signals from the receiving unit are not provided, however to do so is well known as taught by Stam. Stam discloses a moisture sensor and windshield fog detector that includes the sensor unit mounted in the rear view mirror (see fig. 1). Additionally, Stam includes a processor (col. 4, lines 55-58) to analyze signals from the receiver. It would have been obvious to one having ordinary skill in the art at the time of invention to mount the sensor in the rear view mirror to prevent interfering with the drivers field of view and it would have been obvious to one having ordinary skill in the art at the time of invention to include a processor to analyze signals from the receiver to provide means to provide appropriate control of the wiping system.

As to **claim 3**, Levers and Stam disclose everything claimed, as applied above, in addition the optical lenses are provided (col. 3, line 4).

As to **claim 4**, Levers and Stam discloses everything claimed, as applied above, however Levers fails to specifically disclose an optoelectronic receiving unit, however the use of an optoelectronic receiving unit is well known as taught by Stam. Stam provides an optoelectronic

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receiving unit (col. 5, line 45). It would have been obvious to one having ordinary skill in the art at the time of invention to provide a means to analyze the signals produced by the beam emitter.

As to **claim 6**, Levers and Stam disclose everything claimed, as applied above, with the exception of locating the sensor on the vehicle dashboard, however since Levers provides an optical adhesive to mount the sensor (col. 2, lines 10-13), it would have been obvious to one having ordinary skill in the art at the time of invention to mount the sensor in any location out of the field of view of the driver and the provision of an optical adhesive (adhesive that does not interfere with the wavelength used) makes attachment of the sensor to any surface an obvious modification.

As to **claim 8**, Levers and Stam disclose everything claimed, as applied above, in addition Stam provides an infrared light source (col. 9, lines 60-65). It would have been obvious to one having ordinary skill in the art at the time of invention to use an infrared light source since infrared light is not visible to the human eye and thus not distracting to the driver.

As to **claim 9**, Levers and Stam disclose everything claimed, as applied above, in addition at least one addition source of illumination is available (col. 3, lines 25-30).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Levers et al.* (5,543,923) and *Stam et al.* (5,923,027) and further in view of *Zimmerman* (5,386,111).

As to **claim 10**, Levers and Stam disclose everything claimed, as applied above, with the exception of pulsed light signals, however to do so is well known as taught by Zimmerman. Zimmerman discloses a system for optical detection of water droplets that includes the use of pulsed light signals, (col. 5, lines 24-30). It would have been obvious to one having ordinary

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skill in the art at the time of invention to include pulsed light signals to eliminate interference by ambient light.

Allowable Subject Matter

Claims 11-19 are allowable over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken alone or in combination, fails to disclose or render obvious, a method for detecting media on a vehicle window that includes aiming the at least two lens units at the same area of the window, selecting the depth of field range of the at least two lens units so that the depth of the window is covered, separate imaging of the intensity of the signals of the at least two lens units by means of the receiving units and the evaluation unit, comparing the intensities of the signals over the distance x of the depth of field range of the lens units and assigning the signals to the inside of the window and to the outside of the window, comparing the intensity levels of the signals and determining whether a medium is present on one of the sides of the window, and comparing the intensities of the signals over a time period and determining whether a medium of one of a static nature, and a dynamic nature is present on the inside of the window and on the outside of the window, in combination with the rest of the limitations of claim 11.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Hochstein (US 6,207,967 B1); Blasing et al. (US 6,323,477 B1)

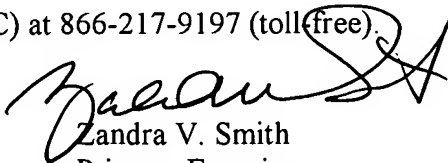
Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (571) 272-2429.

The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).


Zandra V. Smith
Primary Examiner
Art Unit 2877

March 15, 2004